CLAIMS

1. A probe for analyzing protein-protein interaction between two proteins, wherein protein splicing is induced by protein-protein interaction, thereby regenerating a physiochemically or biochemically detectable protein.

2. The probe for protein-protein interaction analysis of claim 1, consisting of two probes that are:
probe a which comprises the N-terminal polypeptide of an intein and the N-terminal polypeptide of a labeled protein; and
probe b which comprises the C-terminal polypeptide of the intein and the C-terminal polypeptide of the labeled protein.

3. The probe for protein-protein interaction analysis of claim 2, wherein the C-terminal of probe a and the N-terminal of probe b each contain a linker sequence.

4. The probe for protein-protein interaction analysis of claim 2 or 3, wherein the intein is an endonuclease derived from yeast VMA.

5. The probe for protein-protein interaction analysis of claim 2 or 3, wherein the intein is DnaE derived from cyanobacterium.

6. The probe for protein-protein interaction analysis of claims 2 to 5, wherein the labeled protein is a fluorescent protein.

7. The probe for protein-protein interaction analysis of claim 6, wherein the fluorescent protein is a green fluorescent

protein.

8. The probe for protein-protein interaction analysis of claims 2 to 5, wherein the labeled protein is a luminescent enzyme.

9. The probe for protein-protein interaction analysis of claim 8, wherein the luminescent enzyme is a luciferase.

10. A method for analyzing protein-protein interaction, comprising:

making a protein linked with probe a as described in claims 2 to 9 and a protein linked with probe b as described in claims 2 to 9 coexist in a system;

and detecting the signal emitted by the labeled protein.

11. The method of protein-protein interaction analysis of claim 10, wherein a polynucleotide that expressses the probe of any one of claims 1 to 9 is introduced into a eucaryotic cell, thereby making the probe a-linked protein and the probe b-linked protein coexist in the cell.